

U.S.C.G. Merchant Marine Exam  
Operator Uninspected Passenger Vessels  
Q172-Navigation Problems-Chart 12221TR  
(Sample Examination)

**Choose the best answer to the following Multiple Choice Questions.**

The following questions are to be answered by plotting on chart 12221 TR, Chesapeake Bay, and using the supporting publications.

Each question is completely independent of any other question on this exam.

The following information is applicable to all questions.

(The abbreviation "psc" stands for "per standard magnetic compass".)

VARIATION IS 9° W

**DEVIATION TABLE**

HDG.MAG. DEVIATION

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|      |       |
|------|-------|
| 000° | 2.0°E |
| 030° | 3.0°E |
| 060° | 4.0°E |
| 090° | 2.0°E |
| 120° | 1.0°E |
| 150° | 1.0°W |
| 180° | 2.0°W |
| 210° | 3.5°W |
| 240° | 3.0°W |
| 270° | 1.5°W |
| 300° | 0.0°  |
| 330° | 1.5°E |

1. At 0914 you are in Chesapeake Channel between Trestle B and Trestle C of the Chesapeake Bay Bridge and Tunnel. What is your ETA at North Chesapeake Entrance Buoy NCA if you are making good 10.9 knots (Use the buoyed channel and appropriate sea lane)?

- ☐ (A) 1049
- ☐ (B) 1055
- ☒ (C) 1038
- ☐ (D) 1044

*If choice C is selected set score to 1.*

2. A note on the chart indicates that currents in excess of how many knots can be expected in the vicinity of the Chesapeake Bay Bridge and Tunnel?

- ☐ (A) 1.75 knots
- ☐ (B) 2.20 knots
- ☒ (C) 3.00 knots
- ☐ (D) 1.50 knots

*If choice C is selected set score to 1.*

3. You sight Tue Marshes Light (LAT 37°14.1'N, LONG 76°23.2'W) in line with Goodwin Thorofare Light "16" (LAT 37°13.7'N, LONG 76°25.0'W) bearing 267° per standard magnetic compass. What is TRUE if your vessel's heading is 056°psc?

- ☐ (A) The compass error is 13°E.
- ☒ (B) The deviation table is in error and should be corrected.
- ☐ (C) The deviation is 4°E.
- ☐ (D) The deviation table is correct for a heading of 056°psc.

*If choice B is selected set score to 1.*

4. The shoal spanned by Trestle B of the Chesapeake Bay Bridge and Tunnel is \_\_\_\_\_.

- ☐ (A) the Middle ground
- ☐ (B) Chesapeake shoal
- ☐ (C) Lynnhaven roads
- ☒ (D) the Tail of the Horseshoe

*If choice D is selected set score to 1.*

5. Your position is LAT 37°00.0'N, LONG 75°30.0'W. What is the course to steer per standard magnetic compass to arrive at LAT 36°59.0'N, LONG 75°48.5'W, if you are turning for 7.8 knots, the current is 139°T at 1.3 knots, and a northwesterly wind is causing 3° of leeway?

- ☐ (A) 280.5°psc
- ☒ (B) 286.0°psc
- ☐ (C) 290.0°psc
- ☐ (D) 283.5°psc

*If choice B is selected set score to 1.*

6. At 0919 your position is LAT 37°00.0'N, LONG 75°30.0'W. You are on course 270°T at 10.5 knots. At 1020 your position is LAT 36°59.5'N, LONG 75°44.9'W. What was the current?

- ☐ (A) 046° at 1.0 knot
- ☒ (B) 246° at 1.4 knots
- ☐ (C) 226° at 0.8 knot
- ☐ (D) 026° at 0.7 knot

*If choice B is selected set score to 1.*

7. You are on course 300° per standard magnetic compass (psc) when you take the following bearings:

New Point Comfort Spit Light "2" 240°psc

Horn Harbor Entrance Light HH 268°psc

Wolf Trap Light 003°psc

What is the position of the fix?

- ☐ (A) LAT 37°20.9'N, LONG 76°11.5'W
- ☐ (B) LAT 37°20.8'N, LONG 76°09.6'W
- ☒ (C) LAT 37°20.8'N, LONG 76°11.0'W
- ☐ (D) LAT 37°21.1'N, LONG 76°08.2'W

*If choice C is selected set score to 1.*

8. (What is the base course per standard magnetic compass while southbound in the middle leg of York Spit Channel?

- ☐ (A) 165.5°psc
- ☐ (B) 180.0°psc
- ☐ (C) 161.0°psc
- ☒ (D) 184.0°psc

*If choice D is selected set score to 1.*

9. At 1919 your position is LAT 37°00.0'N, LONG 75°30.0'W. At 2031 your position is LAT 36°59.5'N, LONG 75°44.9'W. What was the speed made good?

- (A) 10.0 knots
- (B) 10.9 knots
- (C) 9.3 knots
- (D) 8.2 knots

*If choice A is selected set score to 1.*

10. What is the time (DST ZD +4) of the AM high tide at York Point, Poquoson River on 8 September 1983?

- (A) 1048
- (B) 1102
- (C) 1055
- (D) 0955

*If choice A is selected set score to 1.*